

# IBUILT™ GLT POSTS

## DESIGN & INSTALL GUIDE

November 2024

### Purpose

This guide will help correctly specify and install IBuilt H5 glue laminated timber posts for use as structural and non-structural posts.

### Important documents

This guide must be read in conjunction with the:

- IBUILT™ H5 glue laminated posts pass™
- IBUILT™ H5 glue laminated posts warranty, care and maintenance guide



### For our warranty

Refer to [www.ibuilt.co.nz](http://www.ibuilt.co.nz).



# IBUILT H5 GLUE LAMINATED TIMBER (GLT) POSTS

## Description

IBUILT™ H5 posts are structural GL8 glue laminated timber posts manufactured using NZ grown Pinus radiata and treated to hazard class H5.

The posts are available in a range of dimensions and lengths.

## IBUILT™ assurance statement

For use, scope and limitations and performance assurance, refer to the product assurance supplier statement (pass™).



## Skills required

This guide is suitable for use by licensed building practitioners (or deemed practitioners) licensed to the applicable license class or by those who have the proven skill to specify and/or install the posts.

Where restricted building work (RBW) provisions apply, the designer and builder must be able to meet all of their obligations.

## DESIGN

### DESIGN STEPS

#### Select post size

Determine the size required in accordance with NZS 3604:2011 or using specific engineering design in accordance with NZS 3603:1993 and AS1720.1-2010 taking into account project-specific factors; loads, wind zones, seismic zone, exposure zone.

#### Check for fire code obligations

When fire obligations apply, as determined by the position of the posts, specification and design must also be subject to specific fire engineering.

#### Establish installation requirements

Installation must be in accordance with NZS 3604:2011 or when specifically engineered to NZS 3603:1993.

If the posts are to be cast in-ground in a concrete foundation, the following must be specified:

- Hole size.
- Post depth.
- Install a minimum of 100 mm concrete cover between the post and the base of the foundation hole.
- Fixings.
- Coating – above and below ground coating is mandatory. A permanent sealing system (oil based alkyd primer plus two topcoats) appropriate for the Hazard Classification and service location must be applied within 2 weeks of installation. The portion of the post that is to be in-ground must be sealed prior to being cast in concrete.

If the posts are to be founded on a metal bracket, the following must be specified:

- Fixings.
- Coating – above ground coating is mandatory in order to maintain the visual appearance. A permanent sealing system (oil based alkyd primer plus two topcoats) appropriate for the Hazard Classification and service location must be applied within 2 weeks of installation.

#### Confirm design requirements are met

Confirm that the chosen configuration, support spacings and all other specifications meet all relevant design requirements.

Where bracing is required, confirm adequacy.

#### Complete documentation

Where applicable, ensure the building consent documentation includes:

- the IBUILT™ H5 glue laminated posts pass™
- the IBUILT™ H5 glue laminated posts warranty, care and maintenance guide
- this Design and Install Guide
- the size, location and fixing details of the posts accurately reflected on the plans

# INSTALLATION

## PRE-INSTALLATION

### Health and safety

Take all necessary steps to ensure your safety and the safety of others:

- ensure adequate ventilation or mechanical dust extraction when cutting or drilling
- ensure the timber is well supported when cutting and nailing
- use appropriate safety equipment, clothing and footwear
- use all tools in accordance with relevant instruction manuals
- plan and monitor a safe approach for working at height; select and use the right equipment
- clear the work area of any obstructions before work starts
- treated wood offcuts should be disposed to landfill.

### For further information refer to:

- WorkSafe. [July 2018] Small Construction Sites, the Absolutely Essential Health and Safety Toolkit.
- WorkSafe. [February 2019] Introduction to the Health and Safety at Work Act 2015.

These documents are available at [www.worksafe.govt.nz](http://www.worksafe.govt.nz).

## HANDLING AND STORAGE

### Handling

Posts should be handled in a manner to prevent damage to edges and faces. Avoid overstressing the product. This includes dropping, jarring or dragging and unintentional saw cuts. Protect when handling with forklifts, or any other means of lifting or transporting.

### Storage

Posts should not be exposed to rapid changes in moisture or temperature.

Store the posts flat on evenly spaced bearers that extend across the full width of the posts.

During construction it is important to keep moisture out. To prevent the posts absorbing water place a layer of plastic underneath the bearers.

If posts cannot be stored under cover, place timber fillets between the posts and cover with a waterproof cover and allow for good air circulation.

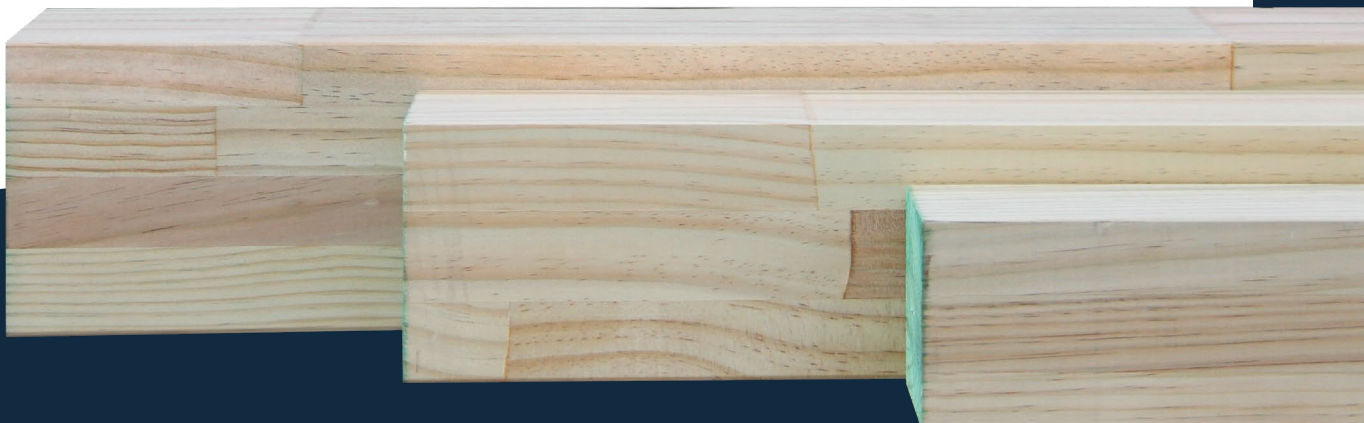
## INSTALLATION

### Key documents

Where subject to a building consent refer to the building consent plans and specifications for the size and location of the posts, the depth of the footing, and fixings.

Where specific assemblies are not contained in the building consent documentation, refer to:

- NZS 3604:2011
- information from all suppliers (structural brackets, coatings, etc.).



## INSTALLATION REQUIREMENTS

### Tools

Install posts with standard carpentry tools and equipment. Use tools in accordance with good trade practice and supplier's instructions.

### Post preparation

All saw cuts, notching, and drilled holes must be dry to the touch before applying two applications of an appropriate timber preservative treatment.

For H5 MCA posts from IBuilt use Protim Reseal Liquid. For CCA posts use copper naphthenate timber preservative treatment.

If installing the post in-ground, the in-ground portion must be sealed with a paint coating before installation (see Finishing).

### Create footing

Where a concrete footing is to be used, prepare the hole and the concrete punch pad in accordance with the building consent plans and specifications or in accordance with this document.

Where founded on a metal bracket, install the bracket in accordance with the bracket supplier's requirements.

### Installation

Place the posts in the correct position, using mechanical lifting equipment if necessary.

Where installed in-ground, set the post to be centralised and plumb in both directions.

Install a minimum of 100 mm concrete cover between the post and the base of the foundation hole. Brace the post with diagonal timber members; use minimal fastenings to reduce the number of repairs when removed.

Where fixed to a structural bracket, fix using fastenings that are either specified in the building consent documentation or in accordance with section 4 of NZS 3604:2011.

Secure the post to the balance of the building work using fastenings that are either specified in the building consent documentation or in accordance with section 4 of NZS 3604:2011.

Structural brackets, bolts and washers and all other fixings (stainless steel or galvanised) when in contact with the post should be coated with a protective grease (non-petroleum). This reduces metal corrosion and makes future replacement easier.

### Finishing

Any damage to the post, depressions, or temporary fixing holes must be filled and sanded. Apply a timber plug and exterior timber grade glue for large imperfections.

When coating the posts:

- The coating must be applied within 14 days of installation.
- An oil based alkyd primer plus two topcoats, ensure adequate coating is applied as per the directions of the paint supplier's data sheets.
- An LRV greater than 45% is recommended.

### For more help



Technical assistance is available at [www.ibuilt.co.nz](http://www.ibuilt.co.nz).

While all reasonable efforts have been made to ensure the accuracy of the information provided, this design and install guide is intended for guidance only and may be subject to change.

Note: All IBuilt H5 glue laminated posts technical information is uncontrolled in printed format, so in all instances refer only to the documentation on the website.